



Guidelines and Specifications for Flood Hazard Mapping Partners

Document Maintenance and Control Plan

1.0 Purpose and Scope

The purpose of this plan is to specify the protocol to be followed in the maintenance and document control of the Federal Emergency Management Agency (FEMA) *Guidelines and Specifications for Flood Hazard Mapping Partners (Guidelines)*. These protocols are intended to ensure that proposed changes to the *Guidelines* are identified, reviewed, and approved in a systematic way; that approved changes are posted and communicated in a timely manner; and that current versions of the *Guidelines* are accessible to Flood Hazard Mapping Partners.

This plan also specifies the review and approval process for FEMA Procedure Memorandums as they often contain new or revised guidance and/or specifications that affect the *Guidelines* contents.

This plan applies to efforts by FEMA and Flood Map Production Coordination Contractor (MCC) personnel to perform interim and annual revisions to the *Guidelines* and to produce new Procedure Memorandums.

2.0 Process Overview

The *Guidelines* and Procedure Memorandums provide guidance to all Flood Hazard Mapping Partners involved in the FEMA Flood Hazard Mapping Program. The *Guidelines* Team, consisting of the FEMA *Guidelines* Lead and a key person from each of the MCCs, works collaboratively to produce and review *Guidelines* changes and Procedure Memorandums that affect the content of the *Guidelines*. Final documents are approved by FEMA.

Revisions to the *Guidelines* and/or new Procedure Memorandums may be identified by FEMA Headquarters and Regional Office staff; MCC staff; Map Modernization Objective Teams (composed of FEMA and contractor staff, Cooperating Technical Partners [CTP] Program participants, and other flood hazard mapping stakeholders), other Flood Hazard Mapping Partners, including CTP Program participants and Study Contractors; and users of flood hazard maps who comment through the Flood Hazard Mapping website.

As illustrated in Figure 1, changes to the *Guidelines* may be initiated in several ways, including but not limited to the following:

- A Procedure Memorandum detailing a new or revised procedure that requires changing the *Guidelines*. Changes documented in Procedure Memorandums may range from rule changes to graphic specifications. Not all Procedure Memorandums necessitate changing the *Guidelines*.
- Identification of new specifications and/or procedures by Map Modernization Objective Teams.
- Availability of new technology that changes the production protocols of National Flood Insurance Program (NFIP) products such as Flood Insurance Rate Maps.
- Infrastructure changes within the NFIP requiring associated changes in programmatic or administrative support services.
- Request for changes to the *Guidelines* from various Flood Hazard Mapping Partners; and
- The scheduled annual *Guidelines* review and revision.

An overview of the *Guidelines* maintenance, review, and revision process is shown in Figure 1.



Guidelines and Specifications for Flood Hazard Mapping Partners

Document Maintenance and Control Plan

Changes in Guidance

- New/ revised procedures
- New / revised specifications
- NFIP changes

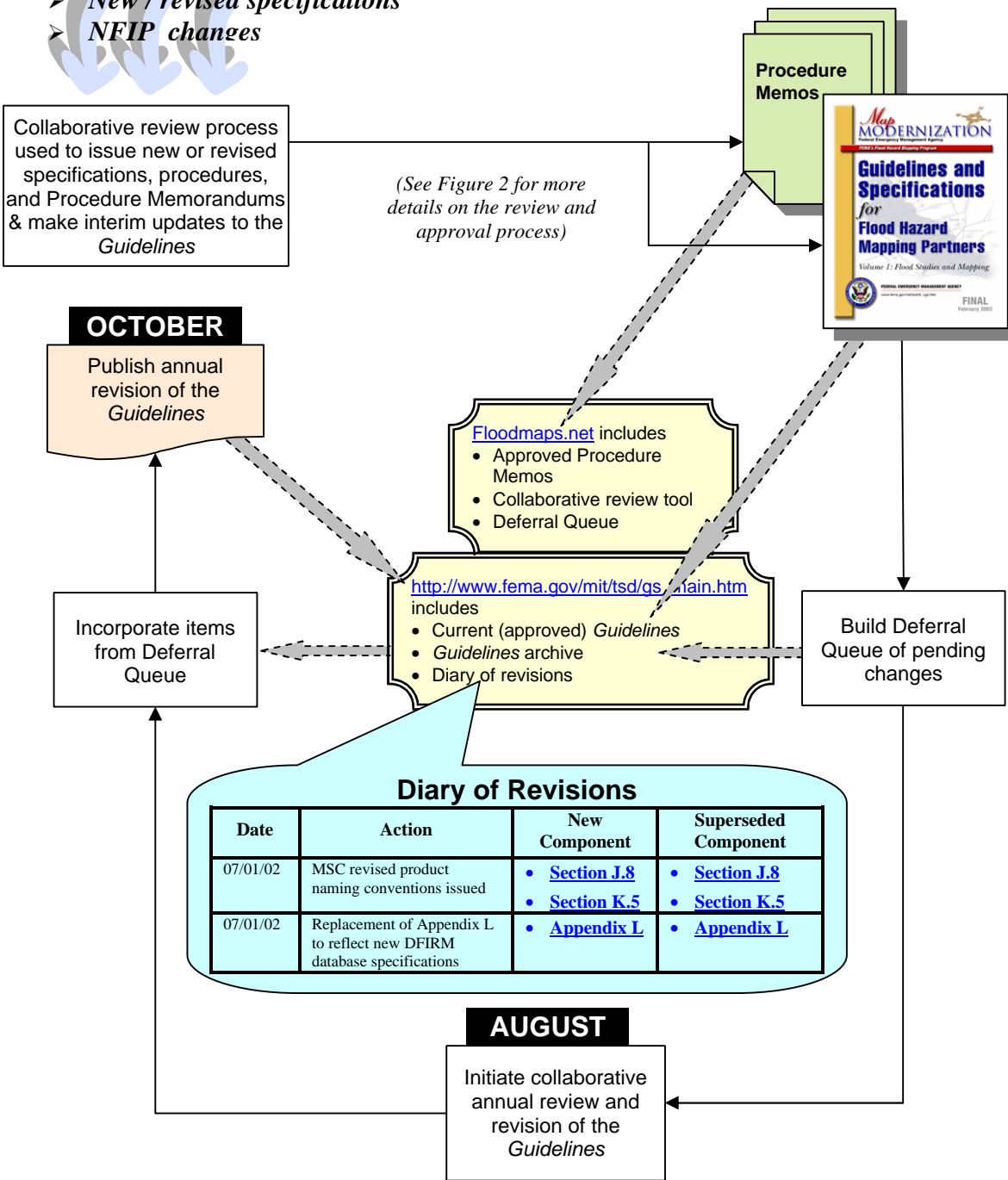


Figure 1. Guidelines Maintenance.



Guidelines and Specifications for Flood Hazard Mapping Partners

Document Maintenance and Control Plan

3.0 Document Maintenance and Control Procedure

Changes to the *Guidelines* shall be conducted on a continuing (interim) and annual basis. The following subsections address maintenance, the collaborative review process used to create Procedure Memorandums and revise the *Guidelines*, the approval and distribution protocol for the new and/or revised components, and the document control protocol.

3.1 *Guidelines* Maintenance

New or revised guidance may be typically documented in a Procedure Memorandum or other document produced by a Map Modernization Objective Team, and may also result in a change to the *Guidelines*. New or revised specifications or procedures may result from the implementation of FEMA's Map Modernization Program through the efforts of Map Modernization Objective Teams. These teams are composed of representatives from FEMA, contractors, CTPs, and other mapping stakeholders. The Map Modernization Objective Team's revised specification or procedure may be documented in a Procedure Memorandum, other guidance document, or revised portions of the *Guidelines*.

Figure 2 shows the process flow for revising the *Guidelines* and creating new Procedure Memorandums. While the *Guidelines* are revised annually, interim section or subsection-level updates may be approved if the new guidance applies to a broader audience than FEMA, the MCCs, the FEMA Map Service Center contractor and Harvard Design and Mapping. Otherwise, modifications are deferred until the following annual revision. The deferred changes to guidance are stored in a "Deferral Queue" maintained by Michael Baker Jr. for incorporation during the annual update process.

As indicated in Table 1 at the end of this plan, a Lead MCC has been designated with Primary Coordinator responsibility for each component of the *Guidelines*. Draft changes to components shall normally be prepared by the MCC identified as the Primary Coordinator for the subject component(s), except when an MCC leads the preparation of a Procedure Memorandum that affects a portion of the *Guidelines* for which it does not have primary coordination responsibility. In this scenario, the MCC that drafted the Procedure Memorandum takes the lead in drafting changes to the affected component(s).

All interim and yearly activities are conducted as a collaborative effort of the *Guidelines* Team, which works together to coordinate updates and revisions. See Section 3.2 of this document for more details on the collaborative review and revision process.

3.1.1 *Interim Guidelines Updates*

Updates to the *Guidelines* and new Procedure Memorandums are prepared in an ongoing fashion as warranted by changes to the Flood Map Project production process or the NFIP in general. For changes requiring an immediate update to specific components, interim revisions are performed throughout the year. To facilitate ongoing document control, the *Guidelines* are formatted to enable users to identify the most recent revision date for each primary section (e.g., 1.2) and each subsection (e.g., 1.2.1). See Section 3.4 of this plan for more details. The Diary of Revisions illustrated in Figure 1 enables further tracking of the update/revision activity.



Guidelines and Specifications for Flood Hazard Mapping Partners

Document Maintenance and Control Plan

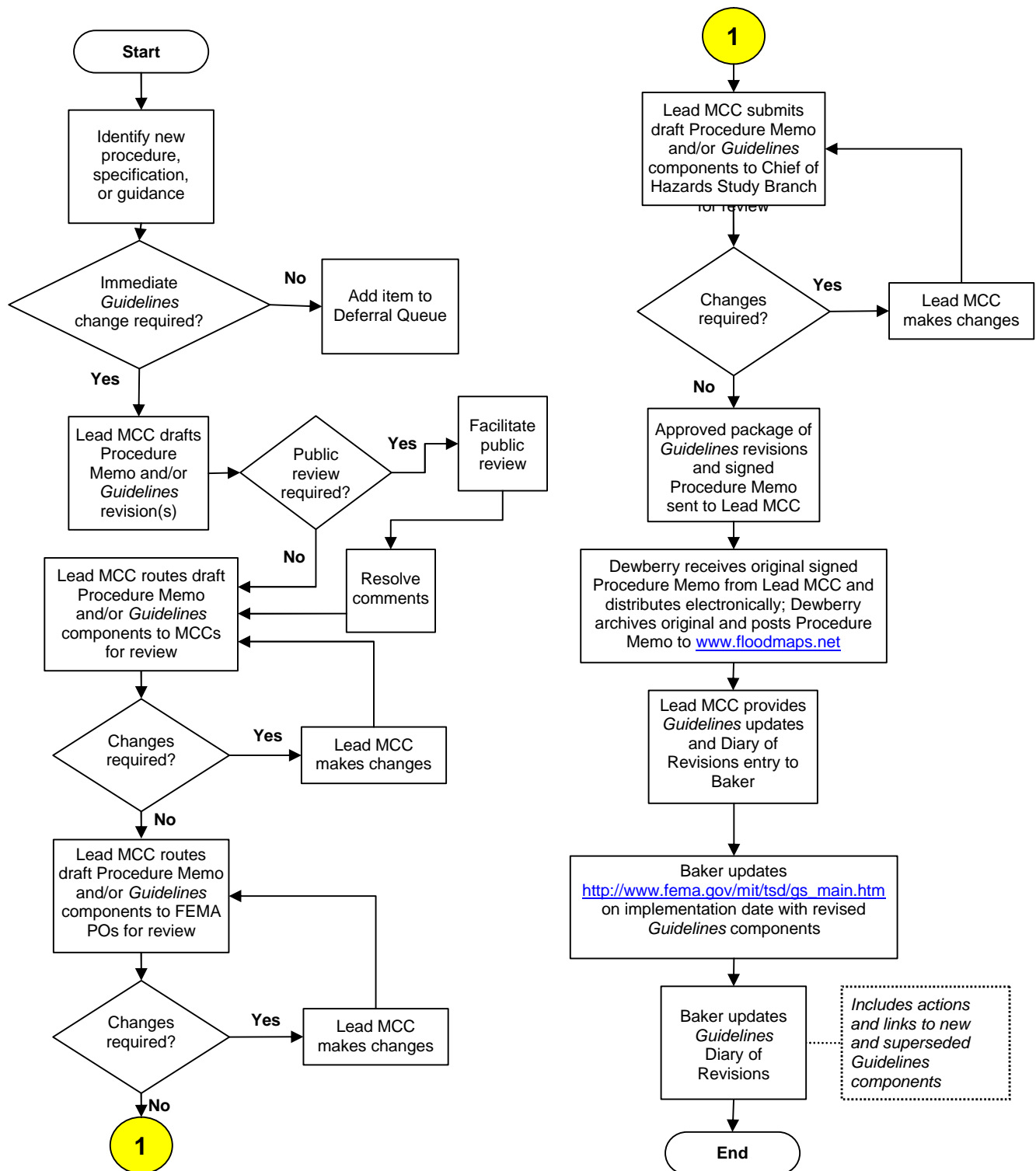


Figure 2. Process Flow for Revising the *Guidelines* and Producing Procedure Memorandums.



Guidelines and Specifications for Flood Hazard Mapping Partners

Document Maintenance and Control Plan

3.1.2 Annual Guidelines Update

FEMA and the MCCs shall conduct a comprehensive (and collaborative) annual review of the *Guidelines*. Initiated in August of each year, the MCCs and FEMA shall review each component, incorporating, as appropriate, items in the Deferral Queue and any other necessary changes. A revised version of the *Guidelines* shall be reissued each October with a new revision date.

3.2 Collaborative Review

➤ Procedure Memorandums

For changes to the *Guidelines* necessitated by a Procedure Memorandum, one of four collaborative review options is employed by the Lead MCC (depending on the complexity and gravity of the proposed change) as follows:

- a) Serially route a hard copy notebook of the draft Procedure Memorandum and the draft revised *Guidelines* components through the MCCs and FEMA.
- b) Serially route electronic review copies via e-mail.
- c) Concurrently distribute electronic review copies to the MCCs and FEMA.
- d) Post the documents on the MapMod_docs portion of the Floodmaps.net site for MCC and FEMA review.

Annual updates are coordinated using Option D. For interim updates, the MCCs are encouraged to use Option D to streamline the review and concurrence process. The Lead MCC shall determine the appropriate review and routing process for interim updates and communicate that choice to the MCC and FEMA review team when the review process begins.

During the review and concurrence process, if a requested change is not approved, the Lead MCC shall provide an explanation to the originator of the proposed change.

➤ Documents prepared by Map Modernization Objective Teams

A Map Modernization Objective Team identifying revised specifications or procedures may produce a Procedure Memorandum documenting the change as described above, or a new document requiring incorporation into the *Guidelines*. If the revised specification or procedure affects how FEMA identifies flood hazards and depicts them on Flood Insurance Rate Maps (FIRMs), review of the proposed change by flood hazard mapping stakeholders and, as warranted, the public and private sector should be obtained and considered before finalization of a revised specification or procedure.



Guidelines and Specifications for Flood Hazard Mapping Partners

Document Maintenance and Control Plan

3.3 Approval and Distribution

After the MCCs have reached consensus on the proposed changes, the Lead MCC shall submit the change package in hard copy and/or electronic form to the FEMA Project Officers, who then forward it to the Chief of the Hazards Study Branch for review and approval. The Lead MCC works with the FEMA Project Officers and the Chief to incorporate review comments and to prepare the final document(s) for approval. FEMA returns the signed Procedure Memorandum to the Lead MCC, who then forwards it Dewberry & Davis LLC for archiving, e-mail notification to FEMA (and its affected contractors), and posting to www.floodmaps.net. The Lead MCC shall provide the approved *Guidelines* components (on a CD-ROM) to Michael Baker Jr. for archiving and posting on http://www.fema.gov/mit/tsd/gs_main.htm.

3.4 Document Control

The *Guidelines* shall constitute a controlled document. The cover pages of volumes and appendices contain the latest annual revision date, followed by the most recent revision of any subsection. Each page of the *Guidelines* includes a header (containing the document title and annual revision date), and a footer containing the primary section number. Primary sections are defined as those sections that have only one decimal (e.g., 1.1). The footer also contains volume-level page numbering. To enable identification of the most recent date of change for each section, the beginning of each section and subsection identifies the most recent revision date, whether through the interim or annual update process.

Figures 3 and 4 show sample *Guidelines* cover and section pages, respectively, that demonstrate the document control protocol. More information on document control through versioning is provided in Section 3.6 of this document.

3.5 Diary of Revisions and Summary of Changes

To facilitate users in determining changes made to the *Guidelines* during annual and interim updates, a Diary of Revisions (illustrated in Figure 1) is posted on the FEMA website (http://www.fema.gov/mit/tsd/gs_main.htm) and populated with a summary of changes as they are made available. A Summary of Changes (Figure 5), located at the beginning of each Volume and Appendix, provides more detailed information about the nature of changes made during each revision subsequent to the initial publication date in February 2002.

3.6 Versioning

To further ensure that users are able to identify the most current information, the cover page and page headers of each component of the *Guidelines* will display the annual revision date as well as the date of any interim revisions (see Figures 3 and 4). It is not envisioned that any component will require more than two updates in any given calendar year. In addition, each component's cover page and page headers will reflect the annual revision date and any subsequent interim revisions.

Document Maintenance and Control Plan

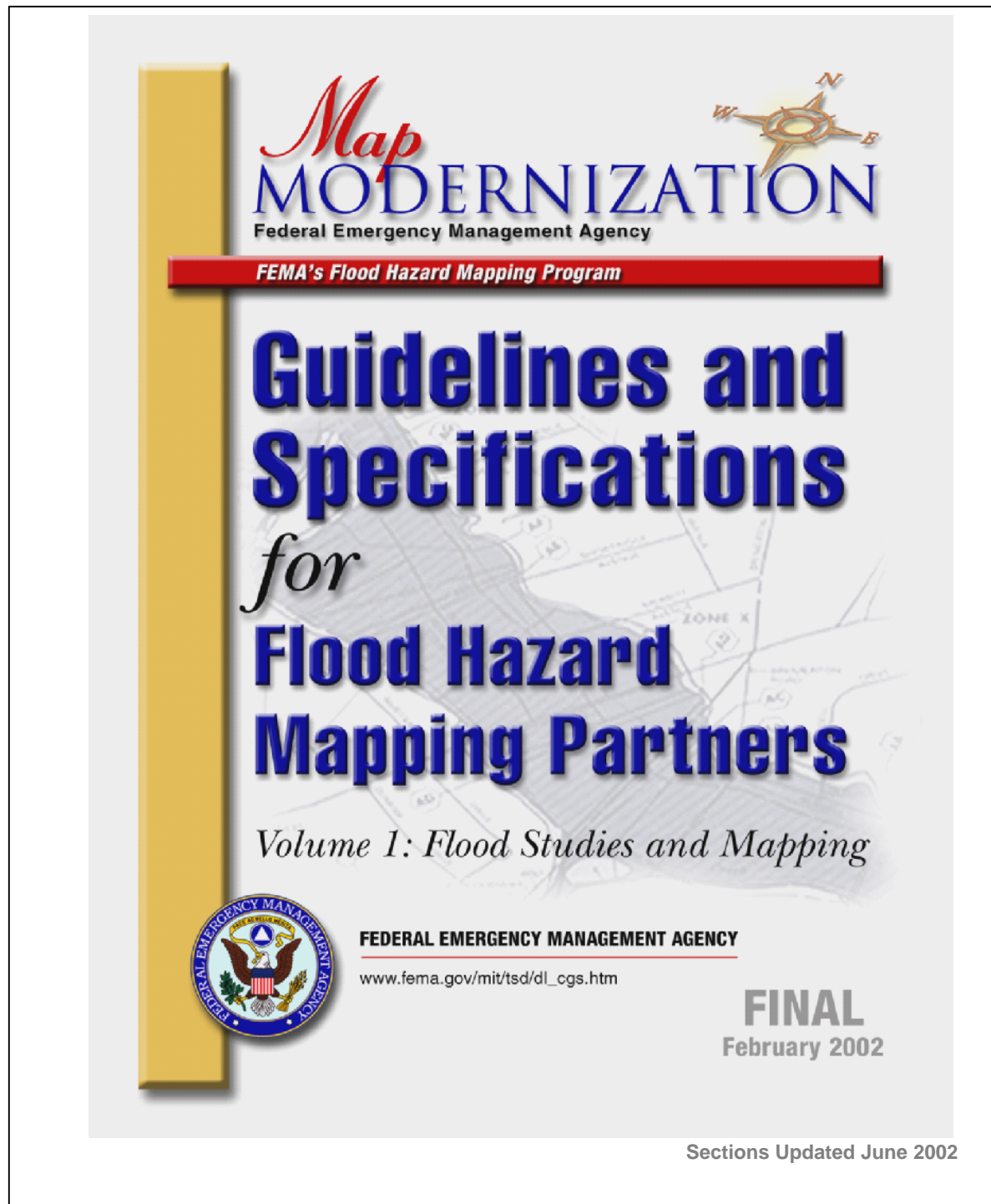


Figure 3. Sample *Guidelines* Cover Page shows overall and latest section revision dates.



Guidelines and Specifications for Flood Hazard Mapping Partners

Document Maintenance and Control Plan

Guidelines & Specifications for Flood Hazard Mapping Partners [February 2002; Sections updated June 2002]

Volume I

Flood Studies and Mapping

Section-level
revision date

Header shows
document title,
annual revision date,
and latest section
revision date

1.1 Overview of the Flood Map Project Process [February 2002]

The Federal Emergency Management Agency (FEMA) has specific mandates within the National Flood Insurance Act of 1968, as amended, to identify flood hazards throughout the nationwide and publish and update flood hazard information in support of the National Flood Insurance Program (NFIP). FEMA is required by the 1968 Act to consult with local officials in identifying floodprone areas, and specific procedures are described in the Act for establishing proposed flood elevations.

The NFIP regulations were developed as the program evolved. They codify the requirements of the 1968 Act and identify the administrative procedures required to carry out the statutory mandates. Parts 65, 66, 67, 70, and 72 of the NFIP regulations refer to specific procedures to be followed in flood hazard mapping activities. To fulfill its mandate to identify floodprone areas, FEMA has an ongoing program to (1) develop new Flood Insurance Rate Maps (FIRMs) for floodprone communities without maps and (2) to produce updated FIRMs for communities with maps. This Volume details the processes, guidelines, and specifications by which FEMA develops and updates FIRMs and collateral Flood Insurance Study (FIS) reports.

Flood Map Project Activities

Activities for developing a new FIRM and/or updating an existing FIRM (both referred to hereinafter as "Flood Map Projects") are completed in four phases:

1. Mapping Needs Assessment;
2. Project Scoping;
3. Topographic and Flood Hazard Data Development/FIS Report and FIRM Map Production; and
4. Preliminary/Post-Preliminary FIS Report and FIRM Processing.

Figure 1-1 depicts the phases of the process, which is applicable to all Flood Map Projects, including those that involve the following:

- Developing new or updated flood hazard data;
- Digitizing floodplain boundaries from the effective FIRMs and fitting them to a digital base map, thus converting the existing manually produced FIRMs to digitally produced FIRMs referred to as DFIRMs; and
- Combinations thereof.

Subsection-level
revision date

1.1.1 Mapping Needs Assessment [June 2002]

For communities with effective Flood Hazard Maps, the purpose of the Mapping Needs Assessment is to evaluate whether the flood hazards and other data shown on the Flood Hazard Map are adequate. If they are not adequate, the community will identify the specific data elements that need to be updated (e.g., flood hazard data for specific flooding sources or base map information).

Footer shows volume-
level page numbering

1-1

Footer shows primary
section number

Section 1.1

Figure 4. Sample Guidelines Page.

Document Maintenance and Control Plan

Guidelines & Specifications for Flood Hazard Mapping Partners [October 2002; Sections updated June 2003]

Volume 3

Program Support

The following Summary of Changes details revisions of Volume 3 subsequent to the initial publication of the *Guidelines* in February 2002. These changes represent new or updated guidance for Flood Hazard Mapping Partners.

[illegible]

Figure 5 – Sample Summary of Changes Page



Guidelines and Specifications for Flood Hazard Mapping Partners

Document Maintenance and Control Plan

4.0 Roles and Responsibilities

There are several entities and individuals with unique roles and responsibilities in the maintenance and document control of the *Guidelines* and Procedure Memorandums. The *Guidelines* Team has primary responsibility for managing and maintaining the *Guidelines*, and several other entities play a secondary role. Table 1 below provides details of each entity's responsibilities as it relates to the *Guidelines* and Procedure Memorandums. Alternate entities may assume writing responsibilities as assigned by FEMA. The "Other FEMA Contractors" referenced in Table 1 include, but are not limited to, the FEMA Map Service Center and Harvard Design and Mapping.

Role	Responsibility
FEMA	<ul style="list-style-type: none"> • Provide oversight to ensure that the <i>Guidelines</i> meet the NFIP mission and objectives. • Identify need for new procedures, specifications, or guidance. • Provide oversight of new and revised protocol affecting the <i>Guidelines</i>. • Review and approve changes to the <i>Guidelines</i> and Procedure Memorandums.
Map Modernization Objective Team(s)	<ul style="list-style-type: none"> • Identify new procedures or specifications for determining flood hazards and/or depicting them on FIRMs • Prepare description of new procedures or specifications for inclusion in Procedure Memorandum and/or revised sections of the <i>Guidelines</i> • Coordinate with the <i>Guidelines</i> Team for inclusion of revised procedures or specifications in update to the <i>Guidelines</i>
Lead MCC	<ul style="list-style-type: none"> • Coordinate review and revision of assigned volumes and appendices of the <i>Guidelines</i> with MCCs and FEMA Project Officers, Project Engineers, and other FEMA staff. • Prepare draft and final revisions to the <i>Guidelines</i>. • Prepare draft and final Procedure Memorandums. • Prepare draft entry for the <i>Guidelines</i> Diary of Revisions when an interim change is prepared. • Coordinate <i>Guidelines</i> revision and Procedure Memorandum reviews. • Notify reviewers of any recommended changes that were not incorporated. • Provide final signed Procedure Memorandums to Dewberry & Davis LLC. • Provide electronic files of <i>Guidelines</i> revisions to Michael Baker Jr. Inc., for posting on the FEMA Flood Hazard Mapping Web site.
MCCs	<ul style="list-style-type: none"> • Identify and coordinate with FEMA and other MCCs on the need for new procedures, specifications, or guidance. • Review and provide comments on the draft <i>Guidelines</i> revisions and Procedure Memorandums prepared by other MCCs and FEMA. • Ensure that staff are aware of new updates to the <i>Guidelines</i> and Procedure Memorandums. • Assume alternate writing responsibilities as requested by FEMA.

Table 1. Roles and Responsibilities



Guidelines and Specifications for Flood Hazard Mapping Partners

Document Maintenance and Control Plan

Role	Responsibility
Guidelines Team	<ul style="list-style-type: none"> Collaborate to review proposed changes and revise the <i>Guidelines</i>. Serve as focal point for FEMA and MCCs in the maintenance and revision of the <i>Guidelines</i>.
Dewberry & Davis LLC	<ul style="list-style-type: none"> Retain signed original Procedure Memorandums. Electronically distribute final Procedure Memorandums. Post final Procedure Memorandums on http://www.floodmaps.net/. Serve as Primary Coordinator for proposed changes to Volume 1, Appendices A, B, C, D, E, H, J, and K, and this Document Maintenance and Control Plan.
Michael Baker, Jr.	<ul style="list-style-type: none"> Post approved <i>Guidelines</i> changes to website, including updates to the <i>Guidelines</i> Diary of Revisions. Maintain deferral queue. Archive superseded sections of the <i>Guidelines</i>. Serve as Primary Coordinator for proposed changes to the <i>Guidelines</i> Executive Summary, List of Acronyms, Glossary of Terms, Introduction, Volume 3, and Appendices F, G, and M.
PBS&J	<ul style="list-style-type: none"> Serve as Primary Coordinator for proposed changes to Volume 2 and Appendices I and L.
Other FEMA Contractors	<ul style="list-style-type: none"> Review and comment on changes to <i>Guidelines</i> components and on new Procedure Memorandums as appropriate.

Table 1. Roles and Responsibilities

5.0 Records Maintenance

Dewberry & Davis LLC retains original signed Procedure Memorandums and posts electronic versions to www.floodmaps.net in a password-protected area used by FEMA and its MCCs. Michael Baker Jr. maintains superseded (archived) and current *Guidelines* files in an area accessible to the public on http://www.fema.gov/mit/tsd/gs_main.htm.